

**REMARKS**

Claims 21-30, 32, 33, 27 and 29-41 are pending in this application. By this Amendment, claims 16-20, 28, 31 and 34 are canceled, claims 35-41 are added, and claims 21-27, 29, 30, 32 and 33 are amended. No new matter is added by this Amendment.

Entry of the amendments is proper under 37 CFR §1.116 since the amendments: (a) place the application in condition for allowance for the reasons discussed herein; (b) do not raise any new issue requiring further search and/or consideration as the amendments amplify issues previously discussed throughout prosecution; (c) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (d) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

**I. The Claims Are Not Anticipated Nor Rendered Obvious**

Claims 16, 20, 21 and 34 were rejected under 35 U.S.C. §102(b) over U.S. Patent No. 3,754,214 (Matsumoto); claims 16 and 31 were rejected under 35 U.S.C. §102(b) over U.S. Patent No. 4,586,377 (Schmid); claims 16, 18, 20, 21, 24, 25, 31, 32 and 34 were rejected under 35 U.S.C. §102(b) over U.S. Patent No. 3,683,211 (Perlman); claims 17-19 were rejected under 35 U.S.C. §102(b) or alternatively under 35 U.S.C. §103(a) over Schmid; claims 17-19 and 22-27 were rejected under 35 U.S.C. §102(b) or alternatively under 35 U.S.C. §103(a) over Matsumoto; claims 17, 19, 22, 23, 36 and 27 were rejected under 35 U.S.C. §102(b) or alternatively under 35 U.S.C. §103(a) over Perlman<sup>1</sup>; and claims 28-30 and 33 were rejected under 35 U.S.C. §103(a) over Matsumoto or Perlman. These rejections are respectfully traversed.

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<sup>1</sup> Applicant assumes the Patent Office is referring to claims 17, 19, 22, 23, 26 and 27 as claim 36 did not exist at the time of the Rejection.

Each of independent claims 35, 40 and 41 recites a first layer including a piezoelectric material and a second layer including a ferroelectric material that are stacked along a direction, the second layer having a polarization axis along the direction, wherein one layer of the first layer and the second layer receives an input signal, and the other layer of the first layer and the second layer outputting an output signal according to the input signal.

However, none of the applied art discloses the first layer and the second layer being stacked along a direction, the second layer having a polarization axis along the direction, wherein one layer of the first layer and the second layer receives an input signal, and the other layer of the first layer and the second layer outputs an output signal according to the input signal.

The Office Action admits that Matsumoto, Schmid and Perlman do not specifically disclose the direction of polarization, and asserts that the polarization direction is inherent in each of these references. However, none of these references inherently disclose the polarization axis of the second layer being along the stacking direction of the first and second layers, wherein one layer of the first layer and the second layer receives an input signal, and the other layer of the first layer and the second layer outputting an output signal according to the input signal, as recited in each of claims 35, 40 and 41.

Accordingly, claims 35, 40 and 41, as well as the claims dependent therefrom, are not anticipated or rendered obvious by Matsumoto, Schmid and/or Perlman.

Reconsideration and withdrawal of the rejection are thus respectfully requested.

## **II. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the pending claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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